

AMENDED CLAIMS

[received by the international Bureau on September 2, 2005;
original claims 1-8 replaced by amended claims 1-10]

- 5 1. A bimorph mirror presenting first and second layers of piezoelectric ceramic together with at least one electrode serving to vary at least one curvature of the mirror as a function of at least one electrical voltage applied to the piezoelectric ceramics, the mirror being
10 characterized in that the first and second layers (1, 2) of piezoelectric ceramic are separated by a central core (5) of material such as glass or silica, which forms a semirigid beam, the thickness (e) of the central core (5) lying in the range 1 mm to 80 mm.
- 15 2. A bimorph mirror according to claim 1, characterized in that the thickness (e) of the central core (5) lies in the range 2 mm to 80 mm.
- 20 3. A bimorph mirror according to claim 2, characterized in that the thickness (e) of the central core (5) lies in the range 5 mm to 80 mm.
- 25 4. A bimorph mirror according to any preceding claim, characterized in that said central core is constituted by a material selected from glass and silica.
- 30 5. A bimorph mirror according to any preceding claim, characterized in that the first and second layers (1, 2) of piezoelectric ceramic are sandwiched between two skin layers (3, 4), e.g. of glass or of silicon.
- 35 6. A bimorph mirror according to any preceding claim, characterized in that it presents a total thickness (E) lying in the range 10 mm to 150 mm.

7. A bimorph mirror according to any preceding claim, characterized in that the first and second layers (1, 2) of piezoelectric ceramic are formed by a plurality of ceramic elements placed side by side in at least one direction along section planes, and in that the section planes (212, 223, ...) of said second layer (2) are offset in at least one direction relative to the section planes (112, 123, ...) of said first layer (1).
- 10 8. A bimorph mirror according to claim 7, characterized in that said offset between the piezoelectric elements in at least one direction is equal to half a pitch P at which the piezoelectric elements are disposed in said direction.
- 15 9. A bimorph mirror presenting first and second layers of piezoelement ceramic, together with at least one electrode enabling at least one curvature of the mirror to be caused to vary as a function of at least one electrical voltage applied to the piezoelectric ceramics, the mirror being characterized in that the first and second layers (1, 2) of piezoelectric ceramic are made up of respective pluralities of ceramic elements placed side by side in at least one direction along section planes, and in that the section planes (212, 223, ...) of said second layer (2) are offset in at least one direction relative to the section plane (112, 123, ...) of said first layer (1).
- 25 10. A bimorph mirror according to claim 9, characterized in that said offset between the piezoelectric elements in at least one direction is equal to half a pitch P at which the piezoelectric elements are placed in said direction.